

ABSTRACT

A method involves the steps of using a mold having a
5 core made of a ferromagnetic material, charging a mold cavity
with a magnet powder, compacting the magnet powder while
applying an orienting magnetic field according to the
vertical compacting in horizontal magnetic field process, and
sintering the compact, thereby producing a radially
10 anisotropic annular sintered magnet in which the remanence in
a radial direction of the annulus increases and decreases at
intervals of 90° in a circumferential direction of the
annulus, and the remanence in a radial direction over the
entire circumference of the annulus has a maximum of
15 0.95-1.60 T and a minimum equal to 50-95% of the maximum. A
method for preparing an annular multi-pole magnet for a
permanent magnet motor involves magnetizing the magnet so
that the boundary between N and S poles is located within the
range that is centered at the radial direction where the
20 remanence exhibits the minimum and extends $\pm 10^\circ$ therefrom in
a circumferential direction.